

BELSEN'KIY, N.

BELSEN'KIY, N., akademik; KRYLOVA, N.; LIBERMAN, S.; POZHARISKAYA, L.;  
SAFONOV, S., inzh.

Stabilizing industrial blood on the beef conveyor line. Mias. ind.  
SSSR 28 no.5:27-28 '57. (MIRA 11:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promysh-  
lennosti (for Belen'kiy, Krylova, Pozhariskaya). 2. Leningradskiy  
myasokombinat (for Safonov).

(Slaughtering and slaughterhouses)  
(Blood) (Synanthrin)

BELEN'KIY, N.G., akademik; PAVLOV, V.A., kandidat biologicheskikh nauk.

Therapeutic serum as a biological stimulant of sexual functions  
in sterile cows. Veterinariia 34 no.8:66-70 Ag '57. (MLRA 10:9)  
(Serum therapy) (Estrus) (Sterility in animals)

BELEN'KIY, N.G., POZHARISKAYA, L.S., KUZENKO, Ye.V., VOLKOVA, A.G.

Improvement in obtaining sterile blood serum for use in medicinals.  
Med.prom. 12 no.8:18-22 Ag '58 (MIRA 11:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy  
promyshlennosti.  
(SERUM).

~~BELEN'KIY, N.G., akademik; POZHARISKAYA, L.S., kand. biol. nauk; POLONSKAYA,~~  
~~L.B., kand. tekhn. nauk; TOMME, L.G., kand. sel'skokhozyaystvennykh~~  
~~nauk; KUKHARKOVA, L.L., starshiy nauchnyy sotrudnik.~~

New methods for utilizing the blood of slaughter-stock as feed.  
Zhivotnovodstvo 20 no.5:70-75 My '58. (MIRA 11:5)  
(Blood as food or medicine) (Meat industry--By-products)  
(Feeding and feeding stuffs)

~~BELENIKLY, N.G.~~; akademik; POZHARISKAYA, L.S., kand. biol. nauk; POLONSKAYA,  
L.B., kand. tekhn. nauk; TOMME, L.G., kand. zootekhn. nauk;  
KUKHARKOVA, L.L.

Methods of preserving the blood of slaughter animals and using it  
for fattening swine. Dokl. Akad. sel'khoz. 23 no. 6:27-32 '58.  
(MIRA 11:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti.  
(Blood--Collection and preservation)  
(Swine--Feeding and feeding stuffs)

BELEN'KIY, N.G., akademik; KRYLOVA, N.N.; BAZAROVA, K.I.

Studying changes occurring in  $S^{35}$ -labeled proteins during thermal denaturation. Dokl. akad. sel'khoz. 23 no.9:29-34 '58.

(MIRA 11:10)

I. Vsesoyunyy nauchno-issledovatel'skiy institut kvasney promyshlennosti.

(Sulphur--Isotopes) (Proteins)

D'YAKOV, Mikhail Iudovich, akademik [deceased]; BELEN'KIY, N.G.,  
obshchiy red.; DMITROCHENKO, A.P., prof., doktor sel'skokhoz.  
nauk, obshchiy red.; KONDYREV, V.Ye., kand.sel'skokhoz.nauk,  
obshchiy red.. V redaktirovaniy prinimali uchastiye: GOLU-  
BENTSOVA, Yu.V., kand.sel'skokhoz.nauk, nauchnyy sotrudnik, red.  
[deceased]; MYSYUTKINA, M.V., kand.sel'skokhoz.nauk, nauchnyy sotrud-  
nik, red.; YEFIMOV, F.F., kand.sel'skokhoz.nauk, nauchnyy  
sotrudnik, red.; KABOZEV, S.M., kand.sel'skokhoz.nauk, nauchnyy  
sotrudnik, red.; BBDNARSKAYA, G.A., red.; BALLOD, A.I., tekhn.red.

[Selected works in two volumes] Izbrannye sochinenia v dvukh  
tomakh. Moskva, Gos.izd-vo sel'khoz.lit-ry. Vol.1. 1959. 515 p.  
Vol.2., 1959. 647 p. (MIRA 13:1)

1. Vsesoyuznaya akademiya sel'skokhoz.nauk im. V.I.Lenina (for  
D'yakov). 2. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'sko-  
khozyaystvennykh nauk imeni V.I.Lenina (for Belen'kiy). 3. Vse-  
soyuznyy nauchno-issledovatel'skiy institut korrleniya sel'sko-  
khozyaystvennykh zhivotnykh (for Golubentseva, Mysyutkina,  
Yefimov, Kabozev).

(Agriculture)

BELEN'KIY, N.G., akademik; POZHARISKAYA, L.S., kand.biologicheskikh nauk;  
VOLKOVA, A.G., mladshiy nauchnyy sotrudnik; KUZENKO, Ye.V., inzh.

Properties of the blood plasma and serum of cattle. Trudy VNIIMP  
no.9:104-108 '59. (MIRA 13:8)  
(Cattle) (Blood analysis and chemistry)

BELEN'KIY, N.G.; POLONSKAYA, L.B.

[Alpha-chymotrypsin; the composition, properties and  
manufacture of the preparation] Al'fa-khimotripsin; sostav,  
svoistva, primeneniye i proizvodstvo preparata. Moskva,  
Vses. nauchno-issl. in-t miasnoi promyshl., 1962. 68 p.

(MIRA 16:3)

(Chymotrypsin) (Meat industry)

BELEN'KIY, N., akademik

Complete utilization of endocrine enzymes raw materials. *Mias.*  
ind. SSSR 34 no.4:6-11 '63. (MIRA 16:10)

BELEN'KIY, N.G., akademik; POLONSKAYA, L.B., starshiy nauchnyy sotrudnik,  
kand. tekhn. nauk; ZUYEVA, L.D., mladshiy nauchnyy sotrudnik

Technology of the manufacture of chymotrypsin preparations from  
cattle pancreas inactive according to the insulin content. Trudy  
VNIIMP no.14:99-102 '62. (MIRA 16:8)

1. Rukovoditel' laboratorii Vsesoyuznogo nauchno-issledovatel'skogo  
instituta maysnoy promyshlennosti (for Belen'kiy).  
(Chymotrypsin)

BELEN'KIY, N.G., akademik; KRYLOVA, N.N., kand. biologicheskikh nauk;  
BAZAROVA, K.I., mladshiy nauchnyy sotrudnik; SEVOST'YANOV, B.A.,  
mladshiy nauchnyy sotrudnik; KUZNEKO, Ye.V., inzh.

Method for the preparation of "MP" hydrolyzates from blood  
proteins and their properties. Trudy VNIMMP no.13:120-144 '62.  
(MIRA 17:5)

1. Eksp. thekh Moskovskogo myasnogo kombinata (for Kuzenko).

BELEN'KIY, N.G., akadenik

[Problems of the biological evaluation of the technological processes in the meat industry] Problema biologicheskoy otsenki tekhnologicheskikh priemov miasnoi promyshlennosti. Moskva, Vses. nauchno-issl. in-t miasnoi promyshl., 1962. 12 p. (MIRA 17:8)

BELEN'KIY, N.G.; BEKKER, R.I.

Effect of ultraviolet rays on nitrogen balance and urobilin  
(stercobilin) excretion in chickens. Biofizika 8 no.4:509-512  
'63. (MIRA 17:10)

1. Moskovskiy tekhnologicheskoy institut myasnoy i molochnoy  
promyshlennosti i Novozybkovskiy gosudarstvennyy pedagogiches-  
kiy institut.

L 10085-67 EWT(1) JK  
ACC NR: AT6026365 (A)

SOURCE CODE: UR/3209/66/000/001/0042/0050  
//

AUTHOR: Belen'kiy, N. G. (Academician); Zayas, Yu. F. (Candidate of technical sciences);  
Orlova, T. N. (Engineer); Kravtsova, A. V. (Engineer)

ORG: none

TITLE: The effect of ultrasonics on the process of extraction of biologically active substances

SOURCE: Ukraine. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya. Mezhdovedomstvennyy respublikanskiy nauchno-tekhnicheskiy sbornik, 1966. Akustika i ul'trazvuk (Acoustics and ultrasonics), no. 1, 42-50

TOPIC TAGS: ultrasonic vibration, ultrasonic effect, cavitation, electrochemical analysis, medicine

ABSTRACT: A literature survey of the effects of ultrasonic vibration on biological substances is presented. The chief effect is that of cavitation. Ultrasonic chemical processes are the result of mechanical forces due to cavitation and electrochemical and photochemical effects due to large electrical forces occurring in cavitation recesses. If air is present in aqueous solutions, the ultrasonic vibrations form the active radicals OH, H, and the peroxide H<sub>2</sub>O<sub>2</sub>. The oxidizing action of ultrasonics disappears upon boiling the liquid, increasing external pressure or adding a protective sub-

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stance to the solution. In order to prevent the oxidation of insulin, butyloxyanisol is used. In the extraction of biologically active substances by ultrasonics, instantaneous decomposition occurs in cavitation recesses; Harvey and Loomis have shown that a time interval of 1/1200 sec is needed to decompose cells. Auler and Woite applied ultrasonic vibrations to cancerous cells *in vitro* and showed that initially the cell nuclei were destroyed, the fragments penetrating into the cytoplasm. Among other works discussed were: Tarnochi--the effect of ultrasonics on diffusion acceleration in organic layers, Katte and Specht--the extraction of difficult nuclei by ultrasonics, Shropschire--extraction of oils from fish materials, Kusano--the effect of ultrasonics on the pharmacological properties of hormones and vegetative nuclei, and Wolf and El'piner--the effect of ultrasonics on the purity of insulin preparation. Some experimental work done on the extraction of insulin from pancreas by ultrasonics was described. Here the use of ultrasonics resulted in a greater insulin output, eliminated the need for secondary extraction, shortened the extraction time to a few minutes, and allowed the insulin to preserve its biological activity during acidification. Orig. art. has: 1 figure, 1 table.

SUB CODE: 06,07/      SUBM DATE: none/      ORIG REF: 007

Card 2/2 <sup>6/p</sup>

3,2200

S/044/60/000/010/013/021  
C111/C333

AUTHOR: Belen'kiy, N.M.

TITLE: On the problem concerning the trajectories

PERIODICAL: Referativnyy zhurnal, Matematika, no. 10, 1960, 106,  
abstract 11744. (Uch. zap. Mosk. gos. zaochn. ped. in-ta.  
Ser. fiz.-matem., 1959, vyp. 3, 231-239)

TEXT: A plane point motion under influence of conservative forces is considered. The Euler equation (projection on the normal) is set up with the aid of the variational principle in the Jacobian form; some simplest examples are considered.

[Abstracter's note: Complete translation.]

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D244/D301

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1087, 1160, 1164

AUTHORS: Belen'kiy, M.A., Engineer; Layner, V.I., Doctor of Technical Sciences, Professor; Petrova, O.A., Candidate of Technical Sciences

TITLE: Bright nickel plating with levelling additives

PERIODICAL: Vestnik mashinostroyeniya, no. 7, 1961, 37-41

TEXT: This article gives the results of research on the above problem conducted by the TsNIIMashdetal'. An electrolyte of the following composition was chosen: 250 to 3000 gm/l of nickel sulphate ( $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$ ), 40 to 50 gm/l nickel chloride ( $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$ ) and 35 gm/l of boric acid ( $\text{H}_3\text{BO}_3$ ). Subsequently  $\text{NiCl}_2$  was replaced by 10 to 15 gm/l of NaCl, since preliminary tests showed that this change does not affect the quality of the deposit or levelling action. The temperature was maintained at  $50^\circ\text{C}$  and current density was 4 to 6  $\text{A}/\text{dm}^2$  except when investigating the influence of these parameters. Coumarin (lactone of o-hydroxycinnamic

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acid,  $C_9H_6O_2$ ) was tested as a levelling agent, for which ethyl alcohol or glacial acetic acid were used as solvents. As specimens, pieces of thin sheets of copper, brass and steel in flat and cylindrical shapes were used. As a criterion of levelling, the formula used by the Czechoslovak Institute for Metals Protection im. Akimov, was adopted. (Eq. 1). where  $h_1'$  and  $h_2'$  - depth of roughness before and after plating. X

$\frac{h_1' - h_2'}{h_1'} \cdot 100\%$ . The effect of Coumarin concentration is illustrated, 0.1 gm/l giving maximum levelling. This concentration, however, does not ensure maximum brightness and in choosing the Coumarin content, a compromise between these two effects must be made. To remove internal stresses and the tendency to pitting of the deposit (caused by Coumarin) other additives must be also used. Higher temperature of the bath tends to reduce internal stresses, but the increase of concentrations of such ions as  $NH_4$ , Na, Mg, Co etc. tends to increase them. According to A.G. Samartsev<sup>4</sup> and Yu. V. Lyzlov (Ref. 7: Vnutrenniye napryazheniya v elektroliticheskikh osadkakh nikelya,

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Bright nickel plating with...

2J262  
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D244/D301

Trudy 1-y nauchno-tekhnicheskoy konferentsii po voprosam intensivizatsii proizvodstva i povysheniya kachestva gal'vanicheskikh pokrytiy, Kiyev - Odessa 1956), the increase of the pH value from 6 to 6.1 or 6.2 produces a sharp increase in internal stresses. Various organic additives influence current consumption and coumarin was tested in this respect. Even small amounts of coumarin were found to increase deposit hardness. To increase the brightness of the deposit and to reduce internal stresses, 2 gm/l of para-toluolsulphamide was added which had the best effect with 1.5 gm/l of coumarin (Fig. 5).

Fig. 5. Legend: Effect of coumarin content on the nickel deposit brightness 1 - current density of 4 A/dm<sup>2</sup>. 2 - of 4 to 6 A/dm<sup>2</sup>.

An electric method, worked out by G.K. Potanov and A.T. Sandzherovskiy (Ref. 10: ZhFKh, t.XXXII, vyp. 6, 1958), was used for measuring

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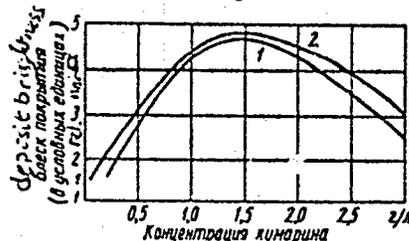


Рис. 5. Влияние содержания кумарина на блеск никелевых покрытий:  
1 - плотность тока 4 а/дм<sup>2</sup>; 2 - 6 а/дм<sup>2</sup>.

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Bright nickel plating with...

internal stresses. This method depends on measuring the bending of the cathode under the stress in the deposit. To prevent pitting, surface active substances such as sodium lauryl sulphate (0.2 to 1.0 gm/l) or a wetting agent which reduces surface tension to 30 dyne/cm., can be added. On the basis of the investigations made, it can be concluded that:

1) Coumarin has a high levelling action but does not give a bright deposit and causes a marked increase of internal stress and pitting. 2) Paratoluolsulphamide in a bath containing coumarin produces a bright and tension free deposit. 3) Addition of D-10 (D-10, sodium alkyl sulphate) in the amount of 0.07 gm/l ensures absence of pitting. 4) For bright nickel plating with a good levelling action the following electrolyte composition (gm/l) is recommended: Nickel sulphate ( $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$ ) 250-300; Sodium chloride (NaCl) 10-15; Boric acid ( $\text{H}_3\text{BO}_3$ ) 35; X

Coumarin 0.8-1.5; P-toluolsulphamide 2; Anti-pitting additive D-10 0.05-0.1; bath working conditions: temperature 50°C; pH = 4.3 to 5.3; current density 4 to 6 A/dm<sup>2</sup>; Rate of deposition 1 to 1.5 μ/min. There are 7 figures and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc.

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S/122/61/000/006/004/011  
D244/D301

Bright nickel plating with...

The references to the English-language publications read as follows:  
Ref. 4. S.A. Watson, J. Edwards, Electroplating and Metal Finishing  
vol. 10, no. 5, 1957, p 136; Ref. 8. J.B. Kushner, Techn. Prog. 45th  
Annual Convent. Amer. Electroplaters. Soc. (Cincinnati, Ohio, 1958)  
Newark, 1958, 28-32, 158-161; Ref. 9. D.J. Fishlock, 'Product Finishing'  
Vol. 11, 1958, no. 3, 4, 6; Ref. 11: E.B. Saubestre, 'Plating', 1958,  
45, no. 9.

X

Card 5/5

BELEN'KIY, N.P.

GIBSHMAN, Aleksandr Yevgen'yevich; IOANNISYAN, Ashot Isayevich; KONDRAT-  
CHENKO, Anatoliy Petrovich; YAKOVLEV, Boris Vonifat'yevich;  
BELEN'KIY, N.P., kandidat tekhnicheskikh nauk, redaktor; VLASOV,  
D.I., kandidat tekhnicheskikh nauk, redaktor; KHITROV, P.A.,  
tekhnicheskii redaktor.

[Principles of planning railroads] Osnovy proektirovaniia zheleznykh  
dorog. Moskva, Gos. transp. shel-dor. izd-vo, 1954. 459 p.  
(Railroad engineering) (MLRA 8:2)

BELEN'KIY, N.P., kandidat tekhnicheskikh nauk.

Widening track spacing on curves. Transp. stroi. 5 no.9:25  
N '55. (Railroads--Curves) (MIRA 9:2)

~~BELEN'KIY, N.P.~~

Review of specification for planning work. Transp. stroi. 6 no.4:  
23-24 Ap '56. (MLRA 9:8)

1. Glavnyy inshener Giprotranstei.  
(Railroad engineering)

BELEN'KIY, N.P., kandidat tekhnicheskikh nauk; VASIL'YEV, N.P., inzhener.

Lengthening the receiving and departure tracks is an important  
element in station reconstruction. Zhel. dor. transp. 38 no.8:  
37-41 Ag '56. (MLRA 9:10)

(Railroads--Stations)

BELEN'KIY, N.P., kandidat tekhnicheskikh nauk.

New planning specifications for the electrification of railroads.  
Elek.i tepl.tiaga no.5:3-5 My '57. (MIRA 10:7)  
(Railroads--Electrification)

IOANNISYAN, Ashot Isayevich, prof., doktor tekhn. nauk; VERTSMAN, G.Z.,  
kand. tekhn. nauk; PETROV, V.I., kand. tekhn. nauk; BULEN'KIY, N.P.,  
kand. tekhn. nauk; KHITROV, P.A., tekhn. red.

[Engineering research and construction of railroads] Izyskaniia i  
postroika zheleznykh dorog. Izd.2., perer. Moskva, Gos. transp.  
shel-dor. izd-vo. Pt.1. [Engineering research and planning]  
Izyskaniia i proektirovanie. 1958. 466 p. (MIRA 11:10)  
(Railroads--Construction)

VERTSMAN, G.Z., kand.tekhn.nauk; BELEN'KIY, N.P., kand.tekhn.nauk

Projected new norms and standard specifications for planning  
railroads. Transp.stroi. 9 no.1:13-17 Ja '59. (MIRA 12:2)  
(Railroad engineering)

BELEN'KIY, N.P., kand.tekhn.nauk

Economic aspects of the introduction of electric and diesel traction. Zhel.dor.transp. 41 no.8:25-31 Ag '59.  
(MIRA 12:12)

1. Glavnyy inzhener Gosudarstvennogo instituta tekhniko-ekonomicheskikh izyskaniy i poryektirovaniya zheleznodorozhnogo transporta.

(Railroads--Electrification)  
(Diesel locomotives)

BELEN'KIY, N.P., kand.tekhn.nauk; VERTSMAN, G.Z., kand.tekhn.nauk

Standards and technical specifications for railroad planning and  
designing. Put' i put.khoz. 5 no.12:33-35 D '61. (MIRA 15:1)  
(Railroad engineering)

BELEN'KIY, N.P. (Moskva)

Development of the railroad network of the U.S.S.R. Izv.  
AN SSSR. Energ. i transp. no.5:581-583 S-0 '63.

(MIRA 16:11)

BELEN'KIY, N.P., kand. tekhn. nauk

Technical and economic comparison of electric and diesel traction. Zhel. dor. transp. 45 no.6:17-21 Ja '63.

(MIRA 16:7)

1. Glavnyy inzh. Gosudarstvennogo instituta tekhniko-ekonomicheskikh izyskaniy i proyektirovaniya zheleznodorozhnogo transporta.

(Locomotives)

(Railroads—Cost of operation)

BELEN'KIY, N.S.

[Computation tables; manual for accounting, planning, and financial workers] Schetnye tablitsy dlia khsiaistvennykh vychislenii; prakticheskoe posobie dlia schetnykh, planovykh, finansovykh rabotnikov.  
3 izd. Moskva, Gosfinizdat, 1950. 660 p. (MLRA 7:11)  
(Ready reckoners)

BELEN'KIY, N. S.

Sbornik zadach i uprazhneniy po khozyaystvennym vychisleniyam (Collection of problems and exercises in economical calculation) Izd. 4., perer. Moskva, Gostorgizdat, 1953.

186 p. Tables

SO: N/5  
611.912  
.B4

★ Belen'kit, N. S. *Tablitsy obratnykh čisel.* [Tables of reciprocals.] Gosudarstvennoe Statističeskoe Izdatel'stvo, Moscow, 1955. 311 pp. 16.35 rubles.

This main table gives  $n^{-1}$  to 7S for  $n=10000(1)99999$ . Each page contains six columns giving in all 300 reciprocals. It is comparable with the standard tables of W. H. Oakes [Table of the reciprocals of numbers. Layton, London, 1865] except that no differences are given by Belen'kit. There is no indication of the sources of the table or the method of computation or checking. Spot checking using Oakes' table and that of National Bureau of Standards [Table of reciprocals of the integers from 100,000 to 200,009. Columbia Univ. Press, New York, 1943; MR 5, 159] revealed no errors. John Tadd.

*BELENKIY N. S.*

~~ANDREYEV, PAVEL PAVLOVICH~~

3/5  
611.91  
.853

Khonyaystvennyye Vtchisleniys I Elementy Mekhanizirovannogo Uchets: Uchebnik Dlyz  
Tekhnikumov Sovetskoy Torgovli (Industrial Accounting and the Elements of Machine  
Calculations, By) P.P. Andreyev I N. S. BELENKIY. Moskva, Gostorgizdat, 1957.  
311 p. Illus. Tables.

BELEN'KIY, Natan Solomonovich; LYUDSKOV, B.P., red.; ISKOVA, A.K.,  
red.; BABICHEVA, V.V., tekhn.red.

[Collection of problems and exercises in commercial arithmetic]  
Sbornik zadach i uprazhnenii po khoziaistvennym vychisleniam.  
Izd.5., perer. Moskva, Gos.izd-vo torg.lit-ry, 1960. 215 p.  
(MIRA 13:7)

(Arithmetic, Commercial)

BELEN'KII, Natan Solomonovich; ISAKOV, V.I., otv.red.; SUROVA, V.A.,  
red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Commercial arithmetic and elements of machine accounting]  
Khoziaistvennye vychisleniia i elementy mekhanizirovannogo  
ucheta. Izd.2., perer. i dop. Moskva, Gos.nauchno-tekhn.  
izd-vo lit-ry po gornomu delu, 1960. 375 p.

(MIRA 13:11)

(Arithmetic, Commercial)

(Machine accounting)

BELEN'KIY, O.M. (Moskva)

Graphic method for plotting trajectories, Izv.AN SSSR.Otd.tekh.  
nauk.Mekh.i mashinostr. no.6:131-133 N-D '62. (MIRA 15:12)  
(Trajectories—Graphic methods)

KRIVOV, V.A.; BELEN'KIY, P.G.

Using DEM electric detonators in the Novomoskovskiy gypsum  
mine. Vzryv. delo no.48/5:27-33 '62. (MIRA 15:9)

1. Proizvodstvenno-eksperimental'noye upravleniye tresta  
Soyuzvzrypprom.

(Detonators) (Gypsum)

BELEN'KIY, P. G.

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PHASE I BOOK EXPLOITATION

SOV/6098

Assonov, V. A., and L. A. Paporotskiy, Resp. Eds.

Novoye v sredstvakh i sposobakh vzryvaniya (New Developments in Blasting Means and Methods). Moscow, Gosgortekhnizdat, 1962. 124 p. (Series: Vzryvnoye delo; Sbornik no. 48/5) Errata slip inserted. 3000 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye gornoye obshchestvo.

Ed. of Publishing House: A. Ya. Koston'yan; Tech. Eds.: L. I. Minsker and G. M. Il'inskaya.

PURPOSE: The book is intended for mining engineers, workers in scientific research and planning organizations, and also for teachers and students of mining and technical schools.

COVERAGE: This collection of articles describes new blasting means and methods, means of protecting electric detonators from stray currents, and improved methods of short-delay detonation.

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## New Developments in Blasting Means (Cont.)

SOV/6098

Э30Ш-Б electric igniter; Э3П-Б electric igniter cartridge; Э3Т-2 capped electric fuse; ДШШ-1 and ДШШ-2 safety detonating fuses; ДШШТ .165 heat-resistant detonating fuse; ДШШУ reinforced detonating fuse; К3ДШШ-58 pyrotechnic detonating relay.

Miroshanskiy, A. S. Electric Detonators for the Salt Industry	19
Moshek, I. M. Instrument for Testing the Switch of the BMK-3/50 Condenser	21
Grinberg, D. M. Conditions for Failure-Proof Firing of Czech DEM Electric Detonators	23
Krivov, V. A., and P. G. Belen'kiy Use of DEM Electric Detonators at the Novomoskovsk Gypsum Mine	27
Demidyuk, G. P. Delay Intervals With Short-Delay Blasting	33

Card 3/6

AUTHORS: Slavin, M., Belen'kiy, S. SOV/107-58-10-48/55

TITLE: Prolonging the Life of Radio Valves (Prodleniye sroka sluzhby radiolamp)

PERIODICAL: Radio, 1958, Nr 10, p 57 (USSR)

ABSTRACT: The authors suggest a way of renewing valves and cathode-ray tubes which have lost their emission. A voltage 1.6 times greater than normal is applied to the filament for 5-6 minutes.

Card 1/1

BELEN'KIY, S. A.

PA 18T64

USSR/Mines and Mining - Equipment  
Mineral Industries

Jul 1947

"Crushing Factory at Open-pit Mines," S. A. Belen'kiy,  
Mining Engineer, 1 p

"Gornyy Zhurnal" Vol CXXI, No 7

Discusses the theories of setting up a crushing  
factory at an open-pit mine.

18T64



~~BELEN'KIY, S.A., inzh.~~

Factory processing gravel and sand in the U.S.A. Mekh. stroi. 15  
no.4:30-31 Ap '58. (MIRA 11:5)  
(United States--Gravel)

**AUTHORS:** Der-Shvarts, G. V., Belen'kiy, S. A. SOV/48-23-6-11/28

**TITLE:** On the Problem of the Influence of a Chromatic Aberration of the Dis-adjustment Upon the Resolution of a Reflection-electron Microscope (K voprosu o vliyaniy odnoy khromaticheskoy aberratsii deyustirovki na razresheniye otrazhatel'nogo elektronnoy mikroskopa)

**PERIODICAL:** Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 6, pp 716-718 (USSR)

**ABSTRACT:** In the introduction, the reduction of chromatic aberration by diaphragms in the objective of electron microscopes is mentioned and the interest in the influence exercised by the geometric dimensions of the pole shoes of the objective upon the dis-adjusting-aberration is shown. When calculating the aberrations of the trajectories, four equations are given, which had been introduced in an earlier paper by Der-Shvarts (Ref 1). The magnetic potential between the pole shoes is then investigated and the formulas (6) and (7) are deduced. By differentiation of this equation the axial distribution of induction components is obtained. For different values of nonmagnetic clearance and of the left-hand channel, values of

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On the Problem of the Influence of a Chromatic Aberration SOV/48-23-6-11/28  
the Dis-adjustment Upon the Resolution of a Reflection-electron Microscope

the axial distribution of induction are then calculated. Calculation of the figures of aberration is dealt with according to Gauss, and the results obtained are given by a table. For the purpose of calculating the dispersion from the data given by the table as well as of the quantity characterizing the dis-adjustment of the diaphragm two formulas (12) and (13) are given. The influence exercised by the constructional parameters of the pole shoes upon the enlargement is distinctly shown by the data given by the table. There are 2 figures, 1 table, and 3 Soviet references.

Card 2/2

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D207/D304

24.3300

AUTHORS: Der-Shvarts, G.V., Kushnir, Yu.M. Rozenfel'd, L.B.,  
Znytaay, P.V., Bezlenkin, S.V., Trutneva, I.S.,  
Belenkiy, S.A., Titov, I.A.

TITLE: Certain problems of reflex electron microscopy

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 8, 1961,  
1358 - 1364

TEXT: This paper was presented at the 3rd All-Union Conference on electron microscopy, Leningrad, October 1960. The present article describes an electron reflex microscope based on the design by Ch. Part, R. Martv. R. Sanorte (Ref. 1: G. r. Acad. Sci. 1955, 240, 20, 1975) who have shown that by tilting the illumination system by 15 - 20° in a reflex microscope, a good image may be obtained with small deformation of the scale and a large useful image area. The main deficiency of such a system in an electron microscope is the chromatic aberration; the aberration can be reduced, by reduc-

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Certain problems of reflex ...

ing the diaphragm aperture of the objective which in turn reduces considerably the picture illumination. In the described microscope the increased illumination was obtained by designing a more effective electron gun and by utilizing a light intensifier. Since the definition of a reflex microscope is determined by the diaphragm of the objective, which means that in an electron microscope the efficiency of the electron gun is determined not by electron brightness but by the current density of the sample, several types of gun were investigated; it was found that triple electrode guns of special construction produce a much greater current density than the standard guns normally used in electron microscopes. The special feature of such a gun is the conical shape of the focussing electrode. The dependence of current density  $j$  at the cross-over point of the anode current was determined for electrode angles  $\alpha$  of  $60^\circ$ ,  $90^\circ$  and  $120^\circ$  with depth of penetration  $h$  of the tip of the cathode filament (filament dia. 0.12 mm) with respect to the cone apex, as a parameter for maximum current density at  $U = 60$  kV. The temperature of the cathode was  $2800^\circ\text{K}$ . The optimum results obtained are

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Certain problems of reflex ...

shown. For an electrode with angle  $\alpha = 120^\circ$ ,  $h = 0.5$  mm; for  $\alpha = 90^\circ$  and  $60^\circ$ ,  $h = 1.5$  mm. For comparison  $j = f(Ia)$  is also drawn for the normal electron gun YEM-100 (UEM-100), in which the tip of the filament is 0.75 mm above the focussing electrode. It may be seen that for  $\alpha = 120^\circ$  the current density is increased by approximately 4.6 times with a current of 250  $\mu$ A and 7 times with a current of 500  $\mu$ A. The electron gun is mounted in the illumination system of the microscope. The gun is introduced through a jacketed port and can be mechanically rotated through any angle from  $0^\circ$  to  $22^\circ$  measured on a vernier scale. The electron optical magnification of the microscope is x2500, resolution about 500  $\text{\AA}$ . The authors also undertook theoretical analysis of the influence on the finition of imperfect assembly and shape of magnet cores. Since the picture is formed by electrons undergoing considerable decelerations, the axial deformation of the magnet slots and errors in their axial positioning produce a constant magnetic field near the axis and perpendicular to it. Such a field has analyzing properties and may introduce chromatic aberration. The evaluation of such aberrations requires the determination of the corresponding pertur-

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bation potentials, normally evaluated by Bertein's method. It may be shown, however, that this method does not determine the exact boundary conditions necessary for solving the problem of the Laplace equation for perturbation potentials. This problem may be solved exactly only when it is assumed that the perturbation is very small. The modified Mathieu functions may be then reduced to the sums of Bessel functions, whose terms are multiplied by the parameter of the Mathieu equation. In their analysis the authors concluded that there is no general method for evaluating the perturbation potentials and used the integral of an ordinary layer to determine them in the near axial region. The details of the analysis are not given. The poles used had the geometrical form with  $s/d$  ratio of 1.5 [Abstractor's note: Symbols  $d$  and  $s$  not defined]. The authors also investigated the filter lenses in an attempt to increase the resolution of the reflex microscope. In their analysis [Abstractor's note: Details not given] they used the mathematical model of single electrostatic lenses of W. Glaser and P. Schiske (Ref. 13: Optik, 1954, 11, 9, 422; 1954, 11, 10, 455; 1955, 12, 5, 233) and of R. Rüdénberg (Ref. 14: J. Franklin Inst. 1948, 246, 4,

Card 4/5

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S/109/61/006/008/010/018  
D207/D304

Certain problems of reflex ...

311, 246, 5, 377). The analysis showed [Abstractor's note: De-  
tails not given] that the resolution of the lens is basically li-  
mited by the fact that non-axial achromatic electrons are being  
focussed in different planes. With an energy spread of electrons  
of the order of 5-6 eV a background is, therefore formed in which  
the picture disappears. There are 10 figures, 5 Soviet-bloc and 9  
non-Soviet-bloc references. The references to the 4 most recent  
English-language publications read as follows: M.E. Haine, P.A.  
Einstein, Brit. J. Appl. Phys 1952, 3, 2, 40; P.A. Sturrock, Phi-  
los. Trans. Roy Soc. London, A, 1951, 243, 368, 387; G.D. Archard,  
J. Scient. Instrum. 1953, 30, 10, 353; R. Rudenberg, J. Franklin  
Inst., 1948, 246, 311; 246, 5, 377.

SUBMITTED: February 7, 1961

Card 5/5

S/109/62/007/001/015/027  
D246/D301

AUTHORS: Der-Shvarts, G.V., and Belen'kiy, S.A.  
TITLE: Investigating the aberration of electronic lens filters  
PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 1, 1962, 126 - 132

TEXT: The aberrations of the so-called electrostatic lens-filter proposed by Börsch have been investigated so far by using inadequate methods. The authors use solutions of the equations of trajectory in two well established mathematical models for this purpose, assuming that the lens is used as a projecting lens of electron microscopes. Making assumptions about the expected working conditions of such a lens, they derive characteristic data concerning the aberrations of the lens, which are summarized in Table 1, where  $d$  - half-width of the axial potential distribution;  $r = 0$  for the axis. Calculating the aberration for a point on the axis, the authors assumed  $U_v = 35$  kV electron velocity and two different sets of conditions  
Card 1/2

Investigating the aberration of ...

S/109/62/007/001/015/027  
D246/D301

tions: losses through the object,  $(\Delta U_v)_{\max} = 4.3 \text{ V}$  and  $(\Delta U_v)_{\max} = 10 \text{ V}$  and magnification  $M = 97.5 \text{ X}$  and  $M = 104 \text{ X}$  respectively. The results are tabulated. The approximate radius of chromatic aberration of position for the cases are  $(\delta_{\text{cap}})_{\max}/M \sim 6900$  and  $28,000 \text{ \AA}$  respectively. For the second set of conditions the aberrations for off-axis points were also calculated along 2 trajectories. Results for geometrical and chromatic aberration are given in tables. The authors' conclusion is that chromatic aberrations of lens filters are quite large. The geometric aberrations for off-axis points are also too large. Hence, the use of lens filters in reflection microscopy lacks perspectives. They may be used in illumination microscopy as intermediate lenses, if losses in the object are small. There are 3 figures, 5 tables and 10 references: 5 Soviet-bloc and 5 non-Soviet-bloc. The reference to the English-language publication reads as follows: R. Rüdtenberg, I. Franklin, Inst., 1948, 246, 322, 377. ✓

SUBMITTED: June 19, 1961

Card 2/32

1. BELEN'KIY, S. I.
2. USSR (600)
4. Physics and Mathematics
7. Shower Processes in Cosmic Rays, S. I. Eelen'kiy. (Moscow-Leningrad, State Technical Press, 1948). Reviewed by L. D. Landau, Sov. Kniga, No. 11, 1948.

9. ~~████~~ Report U-3081, 16 Jan. 1953. Unclassified.

KHUDYKH, Mikhail Il'ich.; ~~BEJEN'KIY, S.I.~~, retsenzent.; PRYANICHNIKOV,  
V.P., retsenzent.; KOPELEVICH, Ye.I., red.; KOGAN, V.V., tekhn. red.

[Repairing and assembling textile machinery] Remont i montazh  
tkatskogo oborudovaniia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry  
po legkoi promyshl., 1958. 342 p. (MIRA 11:11)  
(Textile machinery--Maintenance and repair)

LABUTIN, Aleksandr Lukich; SAGALAYEV, G.V., red.; BELEN'KIY, S.I.,  
red.; ZAZUL'SKAYA, V.F., tekhn.red.

[Corrosion and corrosion control of equipment used in the  
production of organic acids and their derivatives] Korrozia  
i sposoby zashchity oborudovaniya v proizvodstve organicheskikh  
kislot i ikh proizvodnykh. Pod red. G.A.Sagalseva. Moskva,  
Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1959. 184 p. (Korrozia  
v khimicheskikh proizvodstvakh i sposoby zashchity, no.13)  
(MIRA 12:11)

(Acids, Organic)

(Corrosion and anticorrosives)

BELEN'KIY, Simon Isakovich; KHUDYKH, M.I., prof., retsentsent; KATS, N.V., dots., spets. red.; MIZERI, A.A., dots., spets. red.; KALININA, N.M., red.; SHAPENKOVA, T.Z., tekhn. red.

[Handbook on the maintenance and repair of textile machinery; information on materials used for the manufacture and repair of textile machinery, on the reconditioning of parts, allowances and fittings] Spravochnik po remontu tekstil'nogo obrudovaniia; svedeniia o materialakh, primeniemykh pri izgotovlenii detalei i remonte tekstil'nykh mashin, o vosstanovlenii detalei, dopuskakh i posadkakh. Moskva, Izd-vo nauchno-tekhn. lit-ry RSFSR, 1961. 117 p.

(MIRA 14:11)

(Textile machinery--Maintenance and repair)

BELEN'KIY, Simon Isaakovich; KATS, N.V., retsenzent;  
~~SHTEYNGART, M.D., red.~~

[Increasing the service life of parts in the modernization  
and repair of textile equipment] Povyshenie dolgovechnosti  
detalei pri modernizatsii i remonte tekstil'nogo oborudova-  
niia. Moskva, Izd-vo "Legkaia industriia," 1964. 366 p.  
(MIRA 17:7)

BELEN'KIY, S.I., starshiy prepodavatel'

Machine parts made from metal reinforced plastics. Tekst.  
prom. 25 no.5:65-69 My '65. (MIRA 18:5)

1. Institut usovershenstvovaniya inzhenerno-tekhnicheskikh  
rabotnikov i rukovodyashchikh rabotnikov Gossudarstvennogo  
komiteta legkoy promyshlennosti pri Gosplane SSSR.

BELEN'KIY, S.I.

Hydrolysis of hard wood wastes at the Lobva Hydrolysis Plant. *Gidroliz.*  
i lesokhim.prom.10 no.1:17-20 '57. (MLRA 10:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-  
spirtovoy promyshlennosti.  
(Wood waste) (Hydrolysis)

BELEN'KIY, S.I.; KLIMOVA, Z.K.

Processing cotton stalks by means of hydrolysis. *Gidrolis.i.*  
*lesokhim.prom.* 13 no.1:7-10 '60. (MIRA 13:5)

1. Nauchno-issledovatel'skiy institut gidrolisnoy i sul'fitno-  
spirtovoy promyshlennosti.  
(Usbekistan--Cotton) (Hydrolysis)

BELEN'KIY, S.I.; KLIMOVA, Z.K.; SHPUNTOVA, M.Ye.; CHEREMUKHIN, I.K.

Rapid continuous inversion of pentose hydrolyzates. *Gidroliz. i lesokhim. prom.* 14 no.7:25-27 '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-svirkovoy promyshlennosti (for Belen'kiy, Klimova, Shpuntova).
2. Ferganskiy gidroliznyy zavod (for Chereemukhin).  
(Pentoses)  
(Hydrolysis)

RIVKINA, Kh.I.; FISHER, P.N.; BELEN'KIY, S.I.; EININA, N.V.

Peat hydrolysis and obtaining feed yeasts on a base of peat  
hydrolyzates. Trudy Kal. torf. inst. no.13:108-117 '63.  
(MIRA 17:12)

BELEN'KIY, S.I.; KOMAROVA, L.I.; Prinimani uchastiye: SKIBA, I.B.;  
BELAVSKIY, M.A.; VOLOKH, V.Ya.

Propagation of fodder yeast on corncob hydrolyzates. *Gidroliz. i  
lesokhim. prom.* 18 no.3:20-22 '65. (MIRA 18:5)

1. VNIIsintezbelok.

BELEN'KIY, L.I.

PRIKHOT'KO, A.F.

24(7)

p3

PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizichnyy zhurnal, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Babushkin, A.B., A.V. Uvarov, and L.A. Ignat'yeva. Infrared Spectroscopic Study of the Adsorption and Surface Reactions of Ethyl and Methyl Alcohols on Aluminum Oxide

161

Sidorov, A.N. Study of Adsorption on Porous Glass by Means of Infrared Absorption Spectra

167

Belen'kiy, L.I., M. Ye. Kazanskaya, et al. Spectrophotometric Study of Vat Soils

170

Sidorov, T.A., and N.N. Sobolev. Isotopic Shift in the Infrared Spectrum of Boric Acid, and Its Structure

176

Sheynker, Yu. N. Spectra and Tautomerism of Acylated Heterocyclic Amines

180

Postovalkiy, I. Ya., Yu. N. Sheynker, and N.P. Kazarinova. Spectroscopic Study of 9-oxarylaoridines

183

Card 12/30

GOL'DFARB, Ya.L.; TAYTS, S.Z.; BELEN'KIY, L.I.

A new method for the synthesis of macrocyclic compounds. Preparation of alicyclic compounds from thiophene derivatives. Izv. AN SSSR Otd. khim. nauk no.10:1262-1265 0 '57. (MIRA 11:3)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.  
(Alicyclic compounds) (Thiophene)

BELEN'KIY, L. I.

GOL'DFARB, Ya. L. (Moskva); BELEN'KIY, L. I. (Moskva).

Transannular effect in macrocyclic compounds. Usp. khim. 26 no.3.  
362-387 My '57. (MLRA 10:8)

(Macromolecular compounds)

*Belen'kiy, L.I.*

BELEN'KIY, L.I.; KAZANSKAYA, M.Ye.; YAVORSKIY, B.M.; KAMENETSKIY, V.D.

Spectrophotometric analysis of leuco esters (with summary in English). Zhur.fiz.khim.31 no.7:1564-1572 J1 '57. (MIRA 10:12)

1. Institut khlopchato-bumazhnoy promyshlennosti, Moskva.  
(Spectrophotometry) (Esters)

BELIN'KIY, Lyudvig Iosifovich; LIPATOV, S.M., retsenzent; KLYUCHARNV, S.V.,  
retsenzent; GUSEVA, Ye.M., red.; KNAKIN, M.F., tekhn. red.

[Theory of dyeing and experience with its practical application]  
Teoriia krasheniia i opyt ee prakticheskogo primeneniia. Moskva,  
Gos. nauchno-tekhn. izd-vo lit-ry po legkoi promyshl., 1958. 189 p.  
(Dyes and dyeing) (MIRA 11:7)

BELEN'KIY, L.I.; BROMBERG, T.V.; KAZANSKAYA, M.Ye.

Spectrophotometric method of quantitative analysis of the  
interaction between dyes and textile fibers. Nauch.-issl.  
trudy TSNIKHBI za 1958 g:115-123. (MIRA 16:1)  
(Dyes and dyeing--Textile fibers) (Spectrophotometry)

BELEN'KIY, L.I.; BROMBERG, T.V.; KAZANSKAYA, M.Ye.

Radiochemical oxidation of vatsoi dyes. Nauch.-issl.trudy  
TSNIKHBI za 1958 g's 123-144. (MIRA 16:1)  
(Dyes and dyeing--Chemistry)

BELEN KII, L. I.; KAZANSKAYA, M. P.; BROMBERG, I. V.

"Work in the Field of Dyestuff Absorption Spectra."

report presented at the Section on Colloid Chemistry, VIII Mendeleev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959.  
(Koll. Zhur. v. 21, No. 4, pp. 509-511)

BELEN'KIY, L. I., Doc Tech Sci (diss) -- "Investigation of the physicochemical properties of vat and sulfur dyes". Moscow, 1959. 24 pp (Min Higher Educ USSR, Moscow Textile Inst), 150 copies (KL, No 25, 1959, 131)

BELEN'KIY, Lyudvig Iosifovich; SHVIREV, S.S., retsenzent; VERBITSKAYA,  
Ye.M., red.; SHAPENKOVA, T.A., skhn.red.

[Automatic control and regulation of technological processes in  
the finishing industry] Avtomaticheskii kontrol' i regulirovanie  
tehnologicheskikh protsessov otdelochnogo proizvodstva. Moskva,  
Gos.nauchno-tekhn.isd-vo RSFSR, 1960. 137 p.

(MIRA 14:4)

(Textile finishing)

(Automatic control)

RUMYANTSEVA, L.P., mladshiy nauchnyy sotrudnik; BLINOV, V.A., starshiy  
nauchnyy sotrudnik; BELEN'KIY, L.I., prof.

Effect of textile finishes on the soiling of textile materials.

Tekst.prom. 22 no.8:64-67 Ag '62.

(MIRA 15:8)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov  
i krasiteley (for Rumyantseva, Blinov). 2. Vsesoyuznyy zaachnoy  
institut tekstil'noy i legkoy promyshlennosti (VZITLP) (for  
Belen'kiy).

(Textile finishing)

GOL'DFARB, Ya.L.; TAYTS, S.Z.; BELEN'KIY, L.I.

New method of synthesizing macrocyclic compounds. Report No.4:  
Effect of the length of aliphatic chain on the character and yield  
of the products formed in the intramolecular acylation of  
 $\omega$ -(2-thienyl)alkanoic acid chlorides. Izv.AN SSSR.Ser.khim. no.8:  
1451-1460 Ag '63. (MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Acids, Fatty) (Cyclization)

KON'KOV, Aleksey Ivanovich; ZEL'DIN, Yuliy Rafailovich; KURGIN,  
Yuriy Mikhaylovich; KOZLOVSKIY, Sergey Dmitriyevich;  
KON'KOVA, Mayya Borisovna; IUDANOV, Konstantin  
Dmitriyevich; BELEN'KIY, L.I., retsenzent; ABRAMOV, S.A.,  
retsenzent; ZELEN'SKAYA, G.G., retsenzent; SIBIRTSEV, S.L.,  
retsenzent; VERBITSKAYA, Ye.M., red.

[Equipment for the finishing operations in the textile  
industry] Oberudovanie etdel'nochnogo proizvodstva tekstil'-  
noi promyshlennosti. Moskva, Legkaia industriia, 1964.  
417 p. (MIRA 18:1)

KARAYEV, A.I.; BELEN'KIY, L.I.

Mechanism of the central regulation of interoceptive metabolic reflexes. Zhur. vys. nerv. deiat. 15 no.6:1055-1062 N-D '65.

(MIRA 19:1)

1. Sektor fiziologii AN AzerSSR, Baku. Submitted August 1, 1965.

BELÉN'KITŪ, Semen Isaakovich; KALASHNIKOVA, L.V., red.

[Increasing the durability of gear wheels used in the industrial equipment of enterprises of light industry; a manual] Povyshenie dolgovechnosti zubchatykh koles oborudovaniia predpriatii legkoi promyshlennosti; uchebnoe posobie. Moskva, Legkaia industriia, 1964. 35 p.  
(MIRA 18:5)

BELEN'KIY, Semen Isaakovich; KALASHNIKOVA, L.V., red.

[Increasing the durability of bearing parts used in the industrial equipment of light industry; a manual] Povyshenie dolgovechnosti podshipnikovyykh detalei oborudovaniia legkoi promyshlennosti; uchebnoe posobie. Moskva, Legkaia industriia, 1964. 61 p. (MIRA 18:5)

L 54979-65 ENT(m)/EPF(c)/EWA(d)/EWP(t)/EWP(z)/EWP(b) KJA/JD/WB  
ACCESSION NR: AP5007632 S/0365/65/001/001/0125/0130  
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B

AUTHOR: Aronson, Yu. P.; Belen'kiy, S. M.

TITLE: Corrosion inhibitors for carbon steel in dilute sulfuric acid

SOURCE: Zashchita metallov, v. 1, no. 1, 1965, 125-130

TOPIC TAGS: steel corrosion, corrosion preventative, carbon steel, dilute sulfuric acid/ st. 20 steel

ABSTRACT: The object of this study was to find inhibitors of acid corrosion which would sufficiently reduce the dissolution rate of carbon steel in dilute sulfuric acid so that the steel could be used for the construction of apparatus containing dilute (0.2 N) sulfuric acid. The effect of over 80 organic substances and 20 binary mixtures on the corrosion rate of st.20 steel in 0.2 N sulfuric acid was investigated. This rate drops down to 0.1 mm/year and lower upon the introduction into the solution of certain compounds whose molecules contain the group -NH-CS-NH- (thiocarbamide, 2-mercaptobenzimidazole, 4(5)-phenyl-2-mercaptimidazole), and also of thiophen and halide salts of pyridine bases. The necessary concentrations

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ACCESSION NR: AP5007632

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of additives are ~0.01-0.02% for all compounds except the halides of pyridine bases, whose required concentration is 0.1-0.5%. When these compounds are employed, carbon steel can be used for the construction of apparatus which is in contact with dilute H<sub>2</sub>SO<sub>4</sub> in such industrial processes as extraction of plant raw material, diazotization, nitrosation, etc. They may also find applications in the food industry, electroplating, etc. "We express our sincere thanks to S. A. Balenin for interest in the work and helpful suggestions." Orig. art. has 5 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy fiziko-farmatsevticheskiy institut (All-Union Scientific Research Physico-Pharmaceutical Institute)

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NO REF SOV: 011

OTHER: 003

Card 2/2

ACC NR: AP7004789

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INVENTOR: Balezin, S. A.; Aronson, Yu. P.; Belen'kiy, S. M.

ORG: none

TITLE: Method of inhibiting the corrosion of ferrous metals in acid solutions. Class 48, No. 190167. [announced by the All-Union Chemical and Pharmaceutical Scientific Research Institute (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 122

TOPIC TAGS: ~~metal~~ corrosion protection, ~~metal~~ corrosion inhibitor, *FERROUS METAL*, *ACID CORROSION, MERCAPTAN*

ABSTRACT: This Author Certificate introduces a method of inhibiting the corrosion of ferrous metals in acid solutions, according to Author Certificate no. 162738. To improve the degree of protection against corrosion, derivatives of mercaptoimidazole are added to the acid solution in the form of granules containing stearic acid and propargyl alcohol. . [A2]

SUB CODE: 13/ SUBM DATE: none

Card 1/1

UDC: 620.197.3

ARONSON, Yu.P.; BELEN'KIY, S.M.

Inhibitors of carbon steel corrosion in diluted sulfuric acid.  
Zashch.met. 1 no.1:125-130 Ja-F '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy fiziko-farmatsevticheskiy  
institut.

31770  
S/056/61/041/006/009/054  
B108/B138

24.6300

AUTHORS: Baranov, S. A., Samoylov, P. S., Rodionov, Yu. F.,  
Belen'kiy, S. N., Pirozhkov, S. V.

TITLE: The energy levels of the  $U^{232}$  nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,  
no. 6(12), 1961, 1740-1747

TEXT: To clearing contradictions in data on the  $U^{232}$  levels the authors studied the decay of  $Pa^{232}$ , which was obtained by irradiating  $Pa^{231}$  with slow neutrons. The measurements were made with a magnetic double-focusing  $\beta$ -spectrometer and a  $\gamma$ -scintillation spectrometer. Four new gamma transitions with energies 147, 236, 280, and 1150 keV have been discovered. On the basis of the  $\beta$ -spectrum, conversion electron spectrum, and  $\gamma$ -spectrum, certain data on the gamma transitions in  $U^{232}$  have been obtained (Table 3). It was not possible, however, to establish a complete level scheme. E0 transitions were found between the levels  $0_2^+ \rightarrow 0_1^+$  and

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The energy levels of the...

 $2_2^+ \rightarrow 2_1^+$ . The experimental results agree with theoretical predictions.Mention is made of A. S. Davydov, G. F. Filippov, V. S. Rostovskiy, and A. A. Chaban (ZhETF, 35, 440, 1958; Nucl. Phys., 20, 499, 1960).G. V. Shishkin, A. A. Arutyunov, and Yu. A. Dmitriyev are thanked for help. There are 4 figures, 3 tables, and 13 references: 7 Soviet and 6 non-Soviet. The two most recent references to English-language publications read as follows: J. Perlman. Proc. Intern. Conf. on Nucl. Structure, Kingston, Canada, 1960, p. 547; S. Björnholm et al. Bull. Am. Phys. Soc., 6, 239, 1961. ✓

SUBMITTED: June 21, 1961

Legend to Table 3: (1) energy of the  $\gamma$ -transitions, kev, (2) experiment, (3) theory for, (4) theory, (5) multipolarity of the  $\gamma$ -transition.\* theoretical values of the internal conversion coefficients on the K and L shells taken from Ref. 6 (L. A. Sliv, I. M. Band. Tablitsa koeffitsienty vnutrenney konversii  $\gamma$ -izlucheniya, part 2, Izd. AN SSSR, and part 1, Izd. AN SSSR, 1956). \*\* theoretical values of the internal conversion coefficients on the M shells taken from Ref. 7 (M. E. Rose. Internal Conversion Coefficients, Amsterdam, 1958).

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S/056/62/043/004/002/061  
B102/B186

24.6.62

AUTHORS: Baranov, S. A., Kulakov, V. N., Belen'kiy, S. N.TITLE: Fine structure of Pu<sup>239</sup>  $\alpha$ -radiation 10PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,  
no. 4(10), 1962, 1135 - 1139

TEXT: A very careful study was made of the  $\alpha$ -decay of Pu<sup>239</sup>, using a magnetic  $\alpha$ -spectrometer, in order to complete and improve the U<sup>235</sup> nuclear level scheme. When investigating the Pu<sup>239</sup> spectrum attention was limited to the fine-structure  $\alpha$ -groups within the 4600-5200 keV range having intensities  $\approx 2 \cdot 10^{-6}$ . The 5495.0 keV  $\alpha_0$ -group of Pu<sup>238</sup> was taken as a standard. More than 20  $\alpha$ -groups of low intensity were found, some being complex. The nuclear level scheme (Fig. 2) was constructed from the data got in five series of tests ( $\alpha$ -particle energy, intensity, forbiddenness, level energy). Apart from initial determinations of level characteristics, most of the  $\alpha$ -groups mentioned were here observed for the first time. A new rotational band  $5/2^+$  [63] is assumed to exist. The  $\alpha$ -transition to the U<sup>235</sup> ground state could not be separated from the  $\alpha'_0$ -transition to the Card 1/32 X

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B102/B186

Fine structure of ...

isomeric state of  $U^{235}$  ( $T_{1/2} = 26$  min,  $1/2 + 1/2$  [631]). An  $\alpha$ -transition to a level of  $\sim 46$  keV ( $5/2^-$ ) as found by Newton (Nucl. Phys. 3, 345, 1957) was not observed. The level scheme of Fig. 2 is assumed to be still incomplete, as some  $\alpha$ -groups such as the 4988, 4873, and 4830 groups have at least two components. There are 2 figures and 1 table.

SUBMITTED: April 6, 1962

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1

BARANOV, S.A.; KULAKOV, V.M.; BELEN'KIY, S.N.

Fine structure of  $\text{Pu}^{239}$   $\alpha$ -radiation. Zhur. eksp. i teor.  
fiz. 43 no.4:1135-1139 0 '62. (MIRA 15:11)  
(Plutonium) (Alpha rays)

*Belen'kiy, S. Ye.*  
Category : USSR/Nuclear Physics - Elementary Particles

C-3

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 451

Author : Belen'kiy, S. Ye. and Rozental', I. L.

Inst : Phys. Inst., USSR Acad. of Sciences

Title : On the Annihilation of Anti-Nucleons with Formation of Stars

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 3, 595-596

Abstract : The Fermi statistical theory is used to calculate the probability of formation of a different number of  $\pi$ -mesons during the annihilation of a slow anti-nucleon by a nucleon. The calculation results are given for cases when the isotopic spin is  $T=1$  and  $T=0$ . The most probable value is approximately 3 -- 4 at  $T=1$  and approximately 4 at  $T=0$ . The distribution of the formed mesons by charges is calculated and included in the article (for the case  $n > 3$ ).

Card : 1/1

BELEN'KIY, S.Yu., dots.

Concerning P.P. Obnorskii's article "Experience in planning the  
operation of the district hospital in a city". Zdrav. Ros. Feder.  
3 no.3:33-34 Mr '59. (MIRA 12:4)

(MOSCOW--HOSPITALS)

BELEN'KIY, S.Z. [deceased]; FRADKIN, Ye.S.

Turbulent mixing theory. Trudy Fiz. inst. 29:207-238 '65.  
(MIRA 18:8)

BELEN'KIY, V.

Eliminate superfluous expenditure of labor. Sots.trud no.1:66-68  
Ja '56. (Petroleum industry) (Wages) (MIRA 9:7)

BELEN'KIY, V.

New wage scales in the petroleum and gas industries. Sots.trud.  
4 no.7:52-58 J1 '59. (MIRA 13:4)  
(Gas industry) (Petroleum industry)

BELEN'KIY, V. A.

Use of oxygen blow in melting of pig iron in cupolas. V.  
A. Belen'kiy. *Khimi. Prom.* 1954, No. 1, 81-2. — At one of  
the chem. machinery building plants, O is used in the cupola  
blow. The O is delivered directly into the furnace. The  
use of O in the blow increased the output of the cupola by  
50% and greatly reduced the rejects caused by air holes in  
the castings. M. Hosh

OK  
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ANTOSHINA, N.V.; ASTAF'YEV, G.V.; BABKIN, S.I.; BELAVIN, N.F.;  
BELEN'KIY, V.A.; BEREZIN, I.P.; BOBROV, B.S.;  
VOLKOV, A.M.; GRITSMAN, Yu.Ya.; KUKUSHKIN, L.I.; PEREPELKIN,  
V.P.; PETROVA, N.P.; GESELEVICH, A.M., red.; DEKHTYAR', Ye.G.,  
red.

[New surgical apparatus and instruments; a practical manual  
for physicians, students of senior courses at medical insti-  
tutes and surgical nurses] Novye khirurgicheskie apparaty i  
instrumenty; prakticheskoe rukovodstvo dlia vrachei, studen-  
tov starshikh kursov meditsinskikh institutov i operatsion-  
nykh sester. Moskva, Meditsina, 1964. 253 p.

(MIRA 18:3)

BELEN'KIY, V.I., inzhener.

The S-281 self-propelled suction dredge. Mekh.stroi. 10 no.6:3-6 Je '53.  
(MLRA 6:6)  
(Dredging machinery)